PATENT
Docket No. 56842US002

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s):	MITTLESTADT et al.	Group Art Unit:	3743
Serial No.:	09/888,943	Examiner:	Nihir B. Patel
Confirmation No.:	9282		
Filed:	25 June 2001		
For:	RESPIRATOR VALVE		

RESPONSE UNDER 37 C.F.R. § 1.111

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

The Office Action mailed January 12, 2004, re-opening prosecution after filing of Appellants' Appeal Brief on October 24, 2003, has been received and reviewed. The pending claims are claims 1-18.

Reconsideration and withdrawal of the rejections in view of the following comments are respectfully requested.

Information Disclosure Statements

Applicants submitted Information Disclosure Statements on October 2, 2001, on September 5, 2002, and on February 10, 2003, in each case submitting therewith a 1449 form listing the information cited and requesting an initialed copy of the 1449 to be returned, indicating that the Examiner has considered the information cited therein. However, initialed copies of these 1449 forms have not yet been received by Applicants. It is respectfully requested therefore, that initialed copies of these 1449 forms be returned to Applicants with the next Official Communication. For the Examiner's convenience, Applicants have included herewith a copy of the 1449 form submitted on October 2, 2001 as Appendix A, a copy of the 1449 form

submitted on September 5, 2002 as Appendix B, and a copy of the 1449 form submitted on February 10, 2003 as Appendix C (please note that the document submitted on February 10, 2003 was also submitted on September 5, 2002).

Allowable Subject Matter

Applicants thank the Examiner for notification to the effect that claims 6 and 7 would be allowable if rewritten in independent form.

Summary of the Invention

The present invention is directed to unidirectional valves for use in, e.g., respirators. The valves include a valve flap (*see, e.g.*, Ref. No. 56a in Figure 5a) that has a contour shape. At least a portion of the contour shape is partially flattened when the valve flap contacts the valve seat. *See, e.g.*, FIG. 3 and Specification, p. 6, lines 11-16.

The 35 U.S.C. §102 Rejection

The Examiner rejected claims 1-4 and 8-18 under 35 U.S.C. §102(b) as being anticipated by Japuntich et al. (U.S. Patent No. 5,509,436). Applicants respectfully traverse this rejection and request review and reversal of this rejection for the following reasons.

The inventions recited in claims 1-4 and 8-18 are patentable over U.S. Patent No. 5,509,436 to Japuntich et al. under 35 U.S.C. § 102(b).

Independent claims 1 and 15, as well as claims 2-4, 8-14, and 16-18 dependent thereto, are not anticipated by Japuntich et al. because the reference does not teach each and every element of these claims. For a claim to be anticipated under 35 U.S.C. § 102(b), each and every element of the claim must be found in a single prior art reference. *See, e.g., Verdegaal Bros. v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987) (cited with approval in M.P.E.P. § 2131).

For example, independent claims 1 and 15 each recite a valve flap that has a contour shape. At least a portion of the contour shape of the valve flap is at least partially flattened when the valve flap contacts the valve seat. Example of a valve flap having a contour shape is illustrated, e.g., in FIG. 5a of the present invention where sealing element 71a of valve flap 56a includes support components 90a "to maintain the contour of the flap portion 70a." *See* Specification, page 8, lines 1-13.

As recited in independent claims 1 and 15, at least a portion of the contour shape of the valve flap 70 is at least partially flattened when the valve flap contacts the valve seat (as opposed to its contour shape when not in contact with a valve seat). Thus, the valve flap of the present invention is designed with a contoured shape or curvature. When in use and in contact with the valve seat, however, the valve flap is reshaped into a partially flattened shape.

In support of the rejection, it was asserted in the present Office Action, at page 3, lines 5-7 in reference to claim 1 and at page 4, lines 20-22 in reference to claim 15, that Japuntich et al. disclose a unidirectional fluid valve "wherein the valve flap has a contour shape and further wherein at least a portion of the contour shape of the valve flap is at least partially flattened when the valve flap 24 contacts the valve seat 40." Applicants disagree with this assertion.

The Examiner has not identified any support for the assertion in either the present Office Action nor in any of the preceding Office Actions, other than pointing to the connection of the flap to the valve frame outside of the valve seat. *See, e.g., Japuntich et al.*, Col. 6, lines 33-35. The Examiner describes Japuntich et al. as including a "valve seat 40" against which the flap 24 is flattened.

This interpretation of Japuntich et al. is, however, mistaken because the valve flaps taught in Japuntich et al. do not have an inherent curvature or contour shape to flatten. Rather, Japuntich et al. teaches valve flaps that are flat:

> Flexible flap 24 preferably is made from a material that is capable of displaying a bias toward seal ridge 30 when the flexible flap 24 is secured to the valve seat 26 at surface 40. The flexible flap preferably assumes a flat configuration where no forces are applied and is elastomeric and is resistant to permanent set and creep. *Japuntich et al.*, Col. 7, lines 27-34.
>
> Flexible flap 24 may be cut from a flat sheet of material having a generally uniform thickness. *Id.* at Col. 7, lines 55-56.

In other words, Japuntich et al. teach only flat valve flaps, not valve flaps with a contoured shape, at least a portion of which is flattened by contact with a valve seat as recited in claims 1 and 15 of the present application. Because Japuntich et al. fail to teach each and every element of independent claims 1 and 15, Japuntich et al. cannot anticipate those claims.

As Japuntich et al. fail to teach each and every aspect of independent claims 1 and 15, Japuntich et al. also fail to teach each and every aspect of claims 2-4, 8-14, and 16-18 dependent thereto. Additionally, with respect to claim 2, Examiner referred to FIGS 3-7 and columns 7 and 8 in support of the assertion that Japuntich et al. teach a valve flap that includes "a first side spaced from a second side, and wherein the valve contour varies between the first and second sides." As indicated above, Japuntich et al. fail to teach a valve flap having a contour shape. "The flexible flap [of Japuntich et al.] preferably assumes a flat configuration where no forces are applied" (Japuntich et al., col. 7, lines 31-32). Such applied forces are shown, for example, in FIG 5. Thus, Applicants respectfully submit that Japuntich et al. fail to teach each and every aspect of claim 2.

With respect to claim 3, dependent ultimately from claim 1, Applicants note that the Examiner refers to FIG 3 for support that Japuntich et al. teach a valve flap that includes "a compound curvature." However, in view of the above comments and that FIG 3 fails to specifically teach a valve having a valve contour, Applicants respectfully submit that Japuntich et al. fail to teach each and every aspect of claim 3.

With respect to claim 4, dependent from claim 1, the Examiner cites column 7, lines 55-67 in support of the assertion that Japuntich et al. teach a valve flap that includes "a first end spaced from a second end, and wherein the valve contour varies between the first and second ends." As indicated above, Japuntich et al. fail to teach a valve flap that includes a valve contour, the flexible flap of Japuntich et al. preferably assuming a flat configuration where no forces are applied (Japuntich et al., col. 7, lines 31-32). Applicants, therefore, respectfully assert that Japuntich et al. fail to teach each and every aspect of claim 4.

With respect to claim 8, dependent from claim 1, as well as claims 9 and 10 dependent from claim 8, Applicants note that the Examiner cited FIGS 3 and 4, and column 6, lines 33-67 in support of the assertion that Japuntich et al. teach a valve flap wherein "the valve seat is generally planer [*sic*] and the valve flap has a curvature that causes a bias of the valve flap toward the valve seat to provide a seal between the valve flap and the valve seat." Applicants respectfully submit that FIG 4 fails to show any valve flap curvature whatsoever, and FIG 3 fails to teach the valve flap having a contour shape, as recited in the present claims, particularly in view of the disclosure at column 7, lines 31-32 of Japuntich et al. that the flexible flap preferably assumes a flat configuration where no forces are applied. Thus, it is asserted that Japuntich et al. fail to teach each and every aspect of claims 8-10.

With respect to claim 14, the Examiner cited FIG 3 and column 10, lines 35-45 of Japuntich et al. in support of the proposition that Japuntich et al. teach "a valve flap that is removably attached to the valve body." Applicants respectfully point out that there is no teaching in FIG 3 of a valve flap that is removably attached to a valve body, and at column 10, lines 35-45, Japuntich et al. disclose a valve cover 50 which can be secured to exhalation valve 14 by friction fit (emphasis added). The valve cover 50 is not the valve flap that is removably attached to the valve body as recited in claim 14 (*see*, for example, Japuntich et al., FIG 7, indicating valve cover 50).

In view of all of the above, Applicants submit that the Office has not met its burden in establishing anticipation of claims 1-4 and 8-18 by Japuntich et al. Reconsideration and withdrawal of the rejection are, therefore, respectfully requested.

The 35 U.S.C. §103 Rejection

The Examiner rejected claim 5 under 35 U.S.C. §103(a) as being unpatentable over Japuntich et al. (U.S. Patent No. 5,509,436) in view of Magidson et al. (U.S. Patent No. 6,047,698). Applicants respectfully traverse this rejection.

As discussed above with respect to the rejection of claim 1 (from which claim 5 depends), Japuntich et al. do not teach all of the features recited in claim 1. Applicants submit that Japuntich et al. also do not suggest the missing features, nor is any motivation or suggestion to modify Japuntich et al. to address its deficiencies identified in connection with this obviousness rejection.

Magidson et al. teach a unidirectional fluid valve including "a flat flexible flap which is attached at one end to a valve seat" (Magidson et al., col. 1, lines 27-28, emphasis added). Furthermore, the flap of Magidson "is flat and has no complex configurations" (Magidson et al., col. 1, line 29). Thus, like Japuntich et al., Magidson et al. also fail to teach or suggest the valve flap having a contour shape.

Because the rejection fails to teach all of the recited features or identify a suggestion or motivation to reach the invention recited in claim 5, Applicants respectfully submit that a proper case of *prima facie* obviousness has not been established with respect to claim 5. Reconsideration and withdrawal of the rejection are, therefore, respectfully requested.

Summary

It is respectfully submitted that the pending claims 1-18 are in condition for allowance and notification to that effect is respectfully requested.

The Examiner is invited to contact Applicants' Representatives, at the below-listed telephone number, if it is believed that prosecution of this application may be assisted thereby.

Respectfully submitted for
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CERTIFICATE UNDER 37 CFR §1.8:
The undersigned hereby certifies that the Transmittal Letter and the paper(s), as described hereinabove, are being transmitted by facsimile in accordance with 37 CFR §1.6(d) to the Patent and Trademark Office, addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 12th day of April, 2004, at 3:39 p.m. (Central Time).

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